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WATER RIGHTS: ABORIGINAL WATER USE AND WATER LAW IN THE SOUTHWESTERN UNITED STATES: WHY THE RESERVED RIGHTS DOCTRINE WAS INAPPROPRIATE

Anne E. Ross

Recent events in the American Southwest are creating a tremendous strain on the water resources of that region. The states of the Upper Colorado River Basin are claiming more and more water as the demands of growing urban populations and developing mining interests accumulate.[1] Meanwhile, Los Angeles and other population centers in the lower basin also face growing demands. Similar conflicts are brewing along other southwestern rivers, and over the groundwaters beneath the deserts.[2] In the midst of this controversy are the Indian reservations of the region. The Indians' water rights are protected by the doctrine of reserved rights, which is attacked as unfair to the Indians because it limits the uses for which they may appropriate water and their ability to alienate their water rights, and as unfair to non-Indians because the natives are not held to rules of equitable apportionment nor to prior appropriation to assure their rights.

One question of historical interest is whether, under strict legal principles, the Indians of the Southwest ought to have received aboriginal title to water rights by way of their existing use of the water. This note will examine that question. The evolution of the doctrine of aboriginal title will be discussed and the *Winters* doctrine of reserved rights will be explored. The last part of this note will survey the evidence of the native cultural traditions to determine if aboriginal rights should have been acknowledged, or whether the *Winters* doctrine gave the Indians water rights previously "unearned" under common law.

The Doctrine of Aboriginal Title

In legal history, long occupation of land has nearly always been equated with ownership.[3] Although feudalism constituted

1. *See* Note, *Water Rights: The Winters Cloud Over the Rockies: Indian Water Rights and the Development of Western Energy Resources*, 7 AM. INDIAN L. REV. (1979).

2. *See* Note, *Indian Claims to Groundwater: Reserved Rights or Beneficial Interest?*, 33 STAN. L. REV. 103 (1980).

3. Bennett, *Aboriginal Title in the Common Law: A Stormy Path Through Feudal Doctrine*, 27 BUFFALO L. REV. 617, 618-19 (1978).

an interruption of this doctrine, with land transferable only by a crown grant, the American colonies and the United States' courts have, to a great degree, accepted the application of occupation equating ownership to the aboriginal title of Native Americans to the land they occupied. The recurrent negotiation with Indian tribes over property rights,[4] and the purchase of more than two million square miles of land from them,[5] demonstrates an official recognition of native title.

The doctrine of aboriginal title to land saw its greatest development under Chief Justice Marshall's tenure in the United States Supreme Court.[6] In an early opinion on the subject, Chief Justice Marshall wrote that no aboriginal land title in the native tribes of Georgia was recognized under the common law. "What," asked the Chief Justice, "is the Indian title? It is a mere occupancy for the purpose of hunting. It is not like our tenures; they have no idea of a title to the soil itself. It is overrun by them, rather than inhabited."[7] In his dissenting opinion, Justice Johnson expressed the idea that these Indians were absolute proprietors of the land, and cited the federal government's "uniform practice of acknowledging their right of soil, by purchasing from them, and restraining all persons from encroaching upon their territory."[8]

A position somewhere between those of the majority and dissent above was taken in *Johnson v. M'Intosh*.[9] The essential right held by the United States was found to be the right of *discovery*. This gave the discovering nation the sole right to acquire the land from the natives, exclusive of other European powers. Just what rights remained to the natives is not entirely clear. While "the rights of the original inhabitants were, in no instance, entirely disregarded," they were "to a considerable extent, impaired." While the natives were "admitted to be the rightful occupants of the soil, with a legal as well as just claim to retain possession of it," the discovering nation exercised a dominion that allowed it to grant title to the land "subject only to the Indian right of occupancy."[10]

4. *Id.* at 620.

5. F. COHEN, THE LEGAL CONSCIENCE 253 (1960).

6. For an extensive discussion of the history of this development, *see* Berman, *The Concept of Aboriginal Rights in the Early Legal History of the United States,* 27 BUFFALO L. REV. 637 (1978) [hereinafter cited as Berman].

7. Fletcher v. Peck, 10 U.S. (5 Cranch) 87, 121 (1810).

8. *Id.* at 147.

9. 21 U.S. (8 Wheat.) 543 (1816).

10. *Id.* at 574.

The Court went on to hold that all Indian rights to the land had subsequently been extinguished by conquest, and the fact that the conquered people were driven off or annihilated, rather than incorporated, was excused by the "character and habits" of those people, being "fierce savages, whose occupation was war."[11] One commentator criticizes the Chief Justice's arguments, saying that "[h]e simply characterized the status quo, without any analysis, as resulting from a conquest incident to discovery; a characterization rooted solely in the pretentious rhetoric of European notions of empire."[12] Indeed, it was not conquest—where the conquered people typically become citizens with unimpaired property rights—but purchase that was the prime mechanism of appropriation of Indian lands.

Sixteen years later, in *Worcester v. Georgia*,[13] the Court repudiated this notion of passive "conquest" which extinguished aboriginal rights. It upheld the rights of the Cherokee Nation to territory and self-government against incursion by the state of Georgia. The extreme vulnerability of aboriginal rights to the political process and the inevitable onslaught of Europeans was subsequently demonstrated when President Andrew Jackson refused to enforce the law laid down in *Worcester* against the state of Georgia, resulting in the forced expulsion of the Cherokees from their lands.[14]

Subsequent decisions expanded and elaborated on the doctrine of aboriginal rights. It was held to be a right of possession, use, and occupancy, defined in terms of the native "habits and modes of life."[15] Native title did not pretend to translate aboriginal use into European-type rights, but rather to confer legal status upon the native system.[16] The doctrine recognized and legitimized native notions of communal property.[17] Aboriginal title was based on occupancy, independent of treaty or statute,[18] and it was held to have survived the federal land grants of 1866.[19]

One area in which the doctrine of aboriginal title fails to give Indians full "proprietary ownership" was demonstrated in *Tee-*

11. *Id.* at 589-90.
12. Berman, *supra* note 6, at 665.
13. 31 U.S. 515 (1832).
14. Berman, *supra* note 6, at 665.
15. Mitchel v. United States, 34 U.S. 711, 745 (1835).
16. *E.g., id.*; Lipan Apache Tribe v. United States, 180 Ct. Cl. 487 (1967).
17. United States v. Seminole Indians, 180 Ct. Cl. 375 (1967).
18. Cramer v. United States, 261 U.S. 219, 229 (1923).
19. United States v. Santa Fe Pac. R.R., 314 U.S. 339 (1941).

Hit-Ton Indians v. United States.[20] The natives claimed a right to compensation for the taking of timber from their lands by the federal government. Because of definitional problems over the continuity of possession and physical boundaries of the Indian lands, and because the aboriginal title had been held to be inalienable and based purely on occupancy, the Court denied compensation for appropriation of such lands or the timber thereon by the sovereign.[21]

The Winters Doctrine of Reserved Rights

In the realm of water rights, the doctrine of aboriginal title has not encountered the popularity with the courts that it has enjoyed in questions of title to land. In the arid West, where water rights often determined whether land will be fruitful or entirely barren, the riparian doctrine of superior rights to those owning land adjacent to water has been large usurped by the doctrine of beneficial prior appropriation. This emerged among the miners of the California Territory, where the lack of federal or state law governing the land ceded by the Treaty of Guadalupe Hidalgo in 1848 made local custom the rule.

In 1866 the federal government endorsed the local custom of rights to water based on prior appropriation, and in 1877 the Desert Lands Act granted the right to appropriation of water on public lands subject to state or territorial laws. Apparently no consideration was given to the possibility of aboriginal title to the uninterrupted flow of western streams, nor did the new occupants of these lands respect the beneficial prior appropriation of the natives.[22]

20. 348 U.S. 272 (1955). Some language in *Tee-Hit-Ton* also seemed to rely on the notion of conquest, last seen in *Johnson v. M'Intosh. Id.* at 279-85.

21. In spite of the judicial developments acknowledging aboriginal land rights, the history of the United States has been one of the forced expulsion of Indians from their lands. Lands were often ceded in return for minimal compensation or protection, under frankly compulsive circumstances. *See* Berman, *supra* note 6, at 666-67. The resulting treaties replaced aboriginal rights. Sometimes the law was simply ignored. *See* text accompanying note 14 *supra*. And the rule in *Johnson* was cited long after its repudiation in *Worcester*. See, e.g., note 20 *supra*.

22. See text accompanying notes 45-48 *infra*. *But see* Ranquist, *The Winters Doctrine and How it Grew: Federal Reservation of Rights to the Use of Water,* 1975 B.Y. L. REV. 639, 662-64. Ranquist cites two instances where aboriginal water rights were recognized. In the adjudication of the Gila River, the Pima-Maricopa were given aboriginal right to irrigation waters. United States v. Gila Valley Irrig. Dist., Globe Eq. No. 59 (D. Ariz. June 29, 1935). The Pueblo Land Act (Act of Mar. 13, 1928, ch. 219, 45 Stat. 312) recognized historical irrigation rights in the middle Rio Grande pueblos. Ap-

The leading case on Indian water rights, *Winters v. United States*,[23] has been extensively examined, analyzed, and discussed. Generally, the case dealt with conflicting claims to the waters of the Milk River in Montana by the Indians of the Fort Belknap Reservation and non-Indian prior appropriators. The General Allotment Act of 1886 (Dawes Act) called for the distribution of individual allotments of land to Indian families, in order to break up the aboriginal claims. The tribes involved in the Fort Belknap Reservation had been nomadic hunters and gatherers with aboriginal title to large areas of land. In return for the promise of the federal government to aid in the radical transition from a nomadic life-style to one of sedentary pastoralism and agriculturalism, the Indians ceded most of their lands to the United States.

The Court held that the federal government had, at the time the reservation was created, an implied reserved right to any unappropriated water necessary to fulfill the purposes of the reservation. This right was vested in the *United States government*, based on the commerce clause (navigable servitude) and the property clause (right to regulate federal lands) of the Constitution. It was not seen as a right retained by the aboriginal occupants but rather as a right reserved by the sovereign for its own purposes.[24] Although not explicitly given by the Act creating the reservation, the water rights were held to have been implied under the rule that all ambiguities in treaties will be interpreted in favor of the Indians.[25] In this case, the water was an absolute necessity for the purposes of the reservation, so was held reserved appurtenant to the land.

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parently on these bases, Ranquist asserts that "[i]n any event, the federal government believes that it is obligated to protect the Indians' aboriginal rights as well as all other reserved rights held for the benefit of Indians." *Id.* at 664. Ranquist also asserts that, in any case, reserved rights are always greater than aboriginal rights. Aside from the qualitative differences in these rights, this also ignores the facts that reserved rights are subject to *prior appropriations* at the time the *reservation* was established. *Id.*

23. 207 U.S. 564 (1908).

24. *See, e.g.*, Bloom, *Indian "Paramount" Rights to Water Use*, 16 ROCKY MTN. MIN. L. INST. 669 (1970); Pelcyger, *The Winters Doctrine and the Greening of the Reservations*, 4 J. CONS. LAW 19 (1977); Price & Weatherford, *Indian Water Rights in Theory and Practice: Navajo Experience in the Colorado River Basin*, 40 LAW & CONT. PROB. 97 (1976); Ranquist, *supra* note 22; Sondheim & Alexander, *Federal Indian Water Rights: A Retrogression to Quasi-Riparianism?*, 34 S. CAL. L. REV. 1 (1960); Veeder, *Indian Prior and Paramount Rights to the Use of Water*, 16 ROCKY MTN. L. INST. 631 (1970); Veeder, *Water Rights in the Coal Fields of the Yellowstone River Basin*, 40 LAW & CONT. PROB. 77 (1976); Veeder, *Winters Doctrine Rights*, 26 MONT. L. REV. 149 (1965).

25. *But see, e.g.*, Veeder, *supra* note 24, at 643, 648. Veeder is a strong proponent of aboriginal water rights. He believes that what the Indians did not explicitly grant to the

The government's reserved rights were held neither to the laws of prior useful appropriation, which would require diversion in order to give notice to subsequent appropriators, and beneficial use to prevent waste, nor to the riparian law which requires pro-rata sharing of water in times of shortage.

Subsequent decisions have defined the quantity of water reserved in these circumstances (upon reservations established for farming by Indians) as "enough water . . . to irrigate the irrigable portions of the reserved lands."[26] Reservations declared by executive order (rather than act of Congress) have been held to be within the doctrine, and the application of the doctrine of equitable apportionment to reserved lands has been denied.[27] Some open questions are the standards by which irrigable land is to be measured, and whether the amount of reserved water may vary with the changing purposes of the reservations.[28] In general, the irrigable land formula reserves far more water than will be put to beneficial use by the tribes,[29] and improves the certainty of non-Indian appropriators as to their rights, which under an unquantified reserved rights doctrine are always in jeopardy.

Although it is often argued that the reserved rights doctrine goes beyond fairness in protecting native water rights, and sometimes that it does not go far enough (for example, Indians may not sell their water rights, and there is some question whether they may appropriate water for "new" uses not contemplated at the time of the reservation), what is clear is that reserved rights are *qualitatively* different from aboriginal rights. The *Winters* doctrine does not vest any water rights in the natives themselves. At no point did the United States even make a pretense of purchasing or negotiating Indian water rights. What was the historical reason for this discrepancy? Did the early "settlers" of the American Southwest find a native culture that did

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United States via treaty, they reserve to themselves. As the court said in United States v. Washington (quarrel over state limitation of Indian fishing rights), treaties with these aboriginal title holders were "not a grant of rights to the Indians, but a grant of rights from them and a reservation of those not granted. . . ." 520 F.2d 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976). Veeder interprets *Winters* as recognizing aboriginal water rights and vesting reserved rights in the Indians themselves.

26. Arizona v. California, 373 U.S. 546, 596 (1963).

27. Cappaert v. United States, 426 U.S. 128, 138-39 (1976). For a plea for the application of equitable apportionment (as part of a "beneficial interest doctrine") rather than the reserved rights doctrine to Indian groundwater claims, *see* Note, *supra* note 2.

28. *See* United States v. New Mexico, 438 U.S. 696 (1978); United States v. Nevada, 412 U.S. 534 (1973).

29. *See* Sondheim & Alexander, *supra* note 22.

not live up to their own legal standards for establishing water rights (which rested alternatively on socially acknowledged rights of riparian landowners, or beneficial prior appropriation through diversion)? Or were they conveniently oblivious to the reality of the aboriginal cultures, as was Chief Justice Marshall when he spoke of Indian lands as being "overrun" rather than "inhabited"?[30] An answer may be found in an examination of the archaeological and historical evidence of the Indian cultures of the Southwest.

Aboriginal Water Use and Water Law in the Southwestern United States

As expressed by one analyst, the early aboriginal rights cases "require almost an archaeology to restore the historical and cultural context, which is almost universally ignored in legal writing."[31] Not only has the historical and cultural context of the cases been ignored, but the lawmakers have generally ignored the culture history of the natives whose rights are at stake. The United States' Indian law has been based on ad hoc and self-serving views of the native culture. The failure to recognize water rights in the natives of the Southwest shows an utter disregard for the clear evidence of beneficial appropriation by those tribes. The aboriginal peoples of the southwestern United States had various complex systems of water use and distribution. Although little now remains of the ancient ways, archaeologists have discerned that the natives in some areas practiced flood-plain farming with the aid of dikes and dams, dug systems of ditches and canals to irrigate many acres of maize, squash, pumpkins, grasses, and (after Spanish contact) wheat, constructed terraces and retaining walls to divert water to their crops after periodic rains, and built reservoirs to hold water for domestic and agricultural purposes.[32]

Less is known of the legal systems by which water and riparian

30. See text accompanying note 5 *supra*. For a discussion of history's effect on Indian law, *see* Strickland, *Indian Law and Policy: The Historian's Viewpoint*, 54 WASH. L. REV. 475 (1979); Washburn, *The Historical Context of American Indian Legal Problems*, 40 LAW & CONT. PROB. 12 (1976).

31. Berman, *supra* note 6, at 637.

32. For purposes of this paper, the Indians of the southwestern United States are divided into four major cultural "traditions," each with a modern group and its probable ancient counterpart. This seems to be the most widely accepted categorization. Note, however, that such divisions are complex and by no means absolute. *See*, for example, Paul Kirchott's analysis in *Gatherer's and Farmers in the Greater Southwest* in THE NORTH AMERICAN INDIANS, A SOURCE BOOK (J. Deetz & A. Fisher, eds. 1967).

land were distributed. It is clear, however, that irrigation agriculture required sophisticated group cooperation. The ability to store surplus crops freed some members of society to develop great skill in building dwellings, making pottery and baskets, and to specialize in leading religious ceremonies. This specialization was further enhanced by the mandatory sedentary existence of an agricultural community. Each society must have had some set of social norms and rules defining the rights and obligations of each member, including the development and allocation of water resources.[33]

The Hohokam/Pima-Papago Tradition

The Gila River of southern New Mexico and Arizona feeds into the collecting stream of the Colorado River near the Gulf of California. It is fed by the San Francisco and Tularosa rivers, and joined in the south by the Salt. Along this valley there is a potential for extensive agriculture through irrigation.

Around 7,000 B.P.,[34] the Desert Culture state of the American Southwest, which had been characterized by hunting and gathering, was evolving into the pre-horticultural Cochise Culture in southern Arizona.[35] Probably under the influence of natives of Mexico,[36] horticulture found its way to the Gila and Salt River valleys around 2,000 B.P. Within several hundred years, the culture known as Hohokam dominated this area. The Hohokam culture was characterized by elaborate systems of irrigation canals, excavated out of the native soil and lined with fire-hardened clay. Archaeologists have found evidence of wooden headgates and brush dams that controlled the flow of water. Irrigation canals surviving to the present time are up to 30 feet wide, 15 feet deep, and 25 miles long. One local network was composed of 150 miles of ditches and canals. In all, about one-quarter million acres of land were probably brought under cultivation.

The Hohokam grew corn, squash, beans, and pumpkin. They lived in villages of many single-family dwellings, such as Snake

33. See text and accompanying note 6, *supra*. *See generally* J. PFEIFFER, THE EMERGENCE OF SOCIETY (1977); J. STEWARD, THEORY OF CULTURE CHANGE (1955).

34. Before Present (archaeological term).

35. *See generally, e.g.*, P. GODDARD, INDIANS OF THE SOUTHWEST, (1931); E. HEWETT, ANCIENT LIFE IN THE AMERICAN SOUTHWEST (1943); W. SANDERS & J. MARINO, NEW WORLD PREHISTORY (1970); T. WEAVER, ed., INDIANS OF ARIZONA (1975); H. WORMINGTON, PREHISTORIC INDIANS OF THE SOUTHWEST.

36. *See, e.g.*, Haury, *Before History*, in INDIANS OF ARIZONA, *supra* note 35, at 11.

Town on the Gila[37] and Los Muertos on the Salt, which was composed of 36 large communal structures, and located nine miles from the river. Such statistics reveal a society supported by a tremendous system of irrigation that must have required cooperation by many individuals. Excavation and maintenance was accomplished with stone or wood implements, and dirt was probably hauled away in baskets. Despite the great degree of social organization that must have existed, there is little evidence of social stratification (such as great variation in size of dwellings or quality or quantity of personal possessions) or interpersonal violence. The communities seem to have been highly peaceful and democratic, in contrast to the elaborate political stratification and power structures characterizing other ancient irrigating communities, such as the Mayans of Mexico or the civilizations of the Tigris, Euphrates, and Nile valleys. The water seems to have been communally owned and communally obtained, which is consistent with the historical practices of the probable descendants of the Hohokam culture—the Pimas and the Papagos.

Around 800-600 B.P. the Hohokam culture began to recede. It has been hypothesized that this occurred because of increased salinity of the soil, water-logged soil, drought, or pressure from nomadic Apache tribes. Whatever the environmental pressures involved, irrigation agriculture in the Gila and Salt River valleys did not entirely disappear. The agricultural techniques of the Hohokam survived on a smaller scale among the Pima and the Papago who inhabit this region into historical times, on land reserved for them by the United States government. Modern reservations include the Gila River Reservation, the Papago Indian Reservation, and the Maricopa Indian Reservation.

The first Spanish explorers into the San Pedro, Santa Cruz, Salt, and Gila River valleys in the eighteenth century found the native people to be capable farmers, using small systems of canals and flood-plain irrigation. After the Spanish introduction of wheat, an explorer in 1774 described Pima wheat fields stretching farther than the eye could see.[38] Brush and rock dams diverted water into ditches, which were constructed at narrow bends in the river to take advantage of the increased pressure in the flow of water. Dikes and reservoirs held back receding floodwaters in flood-plain areas. Among the desert-dwelling Papagos, irrigation ditches were constructed where small streams or springs supplied

37. Occupied from approximately 1200-1100 B.P.

38. *See* P. EZELL, THE HISPANIC ACCULTURATION OF THE GILA RIVER PIMAS (1961).

flowing water. Others planted gardens at the mouths of washes and constructed banks of earth to direct water from periodic torrential rains over their crops.

Reconstruction of aboriginal social organization shows that the main irrigation canals were communally owned, cleaned and kept up by labor of the entire district, under the rule of a headman and several foremen. Women also participated, hauling dirt from excavation and in maintenance of canals. Agricultural land was owned by virtue of labor, and each family was expected to maintain its individual ditches. Ownership, whether communal or private, was possible only through creation of valuable land by personal effort. The cooperating group that acquired ownership depended on the size of the task at hand.

Among neighboring sedentary groups, disputes over land, especially the precious flood-plain parcels, only rarely erupted into battles. However, a constant state of hostility existed between the agriculturalists and the nomadic Athapascans (Apaches and Navajos), who frequently raided farming communities in violation of the rights the sedentary occupants honored among themselves.[39]

The Anasazai/Pueblo Tradition

Another culture tradition of the southwestern United States region was found to the northeast of the Hohokam, in the four corners of New Mexico, Colorado, Utah, and Arizona. This was the Anasazai, which gave rise to the Hopi, Zuni, Pueblo, and Havasupai groups. The Anasazai were responsible for the large structures at Pueblo Bonito and Chettro Kettle of Chaco Canyon,[40] perhaps fleeing to Mesa Verde around 600 B.P. in response to invasions of Athapascan-speaking people from the North.

The Anasazai, and later Pueblo, tradition included intensive dry-land farming, using reservoirs and channels to capture runoff and floodwaters. The life-style was sedentary and resistant to change. Gardens were watered by hand or by small ditches

39. *See* E. CASTETTER & W. BELL, PIMA AND PAPAGO INDIAN AGRICULTURE (1942); and notes 35 and 38, *supra*.

40. At Pueblo Bonito, Chaco Canyon, Mesa Verde, and other sites are found extensive "apartment" type dwellings constructed of wood and adobe, including rooms which appear to have been used for sleeping, cooking, food storage, and ceremony.

leading from pools of impounded rainwater. The dwellings of the mesa pueblos often included reservoirs for domestic water.[41]

The historical Hopi, Pueblo, and Zuni were highly communal societies, a trait reflected in their basic personalities. One study found that the Hopi personality achieves happiness only through group work, and derives little satisfaction from property ownership.[42] Although reflected in their basic personality, this communalism was probably carefully engineered by society. One scholar found that:

> Large scale cooperation deriving primarily from the needs of irrigation is . . . vitally important to the life and well-being of the Pueblo community. It is no spontaneous expression of goodwill or sociability. What may seem voluntary to some is the end of a long process of conditioning, often persuasive, but frequently harsh, that commences in infancy and continues throughout adulthood.

Thus communal ownership was imposed by society, although perhaps not by law in the form we know it.

The rules concerning development and allocation of water in these groups undoubtedly reflected their underlying social structure. In 1620 the Spanish imposed a political hierarchy on all but the Hopi pueblos, forcing the native governments to go "underground."Although the Spanish appointed mayordomos to superintend the construction and maintenance of the irrigation ditches, the essentially communal nature of pueblo society remained intact. Land, water, and food are still communally owned by the Pueblo people of today.[43]

The Athapascan/Navajo-Apache Tradition

Around 600 B.P., Athapascan-speaking people migrated from the North into the southwestern United States. These nomads split into the modern Apache and Navajo tribes. Through contact with the prehistoric pueblos, the Navajo adopted dry farming and floodwater agriculture.[44] In 1744 the Spanish found the Navajo raising corn, beans, squash, and melons through floodwater

41. L. WHITE, THE PUEBLO OF SANTA ANA, NEW MEXICO (1976); and sources cited at *supra* note 6.

42. L. THOMPSON & A. JOSEPH, THE HOPI WAY (2d ed. 1965).

43. *See* F. EGGAN, SOCIAL ORGANIZATION OF THE WESTERN PUEBLOS.

44. *See generally* sources cited at note 6 *supra*.

farming. The sheep, introduced by the Spainards, proved perfectly suited to the Navajo way of life.[45]

With the importance of sheepherding, a "common law" of rights to waterholes grew up among the people.[46] The importance of this law and the results of its violation were graphically illustrated to the proprietor of a general store on the Arizona Navajo Reservation. During a period of drought, the native owner of a large flock asked permission from the Indian agent to move his sheep from one corner of the reservation to another. The agent was ignorant of the jealous protection of individual waterholes by various kin groups. The draining and trampling of a local waterhole by the transitory herd led to an angry confrontation between the "owner" of the water and the trespasser. The herder was wounded and his two dogs were shot and killed. Upon hearing of this, the wounded man's family and friends formed a vigilante committee, and a small-scale war nearly resulted. If the native water laws had been recognized by the Indian agent, the incident probably would not have occurred.

The Patayan/Yuman Tradition

In the first millenium A.D. (around 1,000-800 B.P.), wandering bands of Great Basin hunters-gatherers (Patayans) moved into the deserts of western Arizona and Southern California. These were the ancestors of the Yuman-speaking tribes, including the Mohaves, Maricopas, and Yumas. They moved into the valley of the lower Colorado River and began to practice floodwater agriculture. In this period the Colorado flooded its banks two to four times each summer. Some groups in the northern Baja California and the Colorado desert probably also practiced aboriginal ditch-type irrigation of both wild and domestic plants, with water obtained from desert wells and reservoirs.[47]

Among the Yuman (river) people, the rich alluvial bottom lands were in great demand. River water left silt deposits on fields, which were then planted with maize, beans, watermelons, and pumpkins, and in later times, with wheat. Swales and dams held back receding floodwaters which were used to irrigate successive parcels of land. Riparian land was cleared individually by

45. *Id.*

46. F. NEWCOMB, NAVAHO NEIGHBORS (1966). *See* M. SHEPARDSON, NAVAJO WAYS IN GOVERNMENT (1963).

47. *See* J. FORBES, NATIVE AMERICANS OF CALIFORNIA AND NEVADA (1969) and sources cited at note 6 *supra*.

kin groups. Once cleared, the land, and the water that flooded it, was owned by those who had brought it under cultivation. An impartial party would be asked to arbitrate and adjudicate disputes over specific parcels of land, if a settlement could not be reached among the claimants. Occasionally, land disputes would lead to a ritualized "battle" between neighbors. Land was inherited from the father, and if the tenant wished to expand into unused lands, he would ask permission of his neighbors, which was usually granted. Native agriculture was practiced in this fashion until the time of the Spanish conquest.[48]

The Disastrous Clash Between Native and European Traditions

For the native groups of the Southwest who relied so heavily on careful development and regulation of water resources, the coming of the Europeans (including citizens of the United States) spelled the end of ancient cultural and legal traditions. The outsiders' inability to see, or refusal to acknowledge, the rights established by existing users, and their ignorance of the limits established by environmental conditions, have had disastrous results.

Towards the Pima and Pagago,

> Americans were less considerate . . . than Spaniards or Mexicans had been. After the United States acquired the region, American settlers diverted water cruelly from the Pima fields to their own settlements. Dams and storage reservoirs limited further the Indian water supply and the helpless Pimas were reduced to poverty and starvation.[49]

On the Santa Cruz, the introduction of cattle led to overgrazing, erosion, and the deepening of the channel, rendering the irrigation canals useless.

The Navajos were forced onto reservations in the nineteenth century. In 1864 and in 1880, on the Pecos and San Juan River reservations, the United States government attempted to force the Navajos and Mescalero Apaches into a sedentary life-style. The Indians were forced to dig miles of irrigation ditches for sedentary farming. Large sums were appropriated to build windmills, dams, and ditches under the supervision of the army engineers. All were unsuitable for the desert, and were either useless or were

48. E. CASTETTER & W. BELL, YUMAN INDIAN AGRICULTURE (1951); L. BEAN & T. BLACKBURN, eds., NATIVE CALIFORNIANS: A THEORETICAL RETROSPECTIVE (1976).

49. A. JOSEPHY, THE INDIAN HERITAGE OF AMERICA 180 (1968).

washed out by torrential rains.[50] The Yuman groups have also suffered a loss of their native life-style because of the nonrecognition of their rights to water. The regular overflow of its banks by the lower Colorado has been disrupted by dams and removal of water upstream. Without the resulting irrigation and fertilization, the Indian crops will not survive.[51]

The Pueblo have suffered a particularly ironic fate. Under the Treaty of Guadalupe Hidalgo, Mexico required the United States to recognize legal title of the Pueblos to their land.[52] Thus, because Peublo lands are not held by the federal government, they have no reserved rights to water under the *Winters* doctrine. Instead, aboriginal water rights are recognized. However, many non-Indian claims also exist for the same water. Because the recognition of aboriginal water rights is recent, and there is no proof of prior appropriation, there is no basis for determining the quantity and quality (against adverse interests) of those rights.[53]

Conclusion

From archaeological and historical evidence, it is clear that the natives of the Southwest not only had distinct and definite water-tenure systems, which should have been recognized under the doctrine of aboriginal title, but that they were full-fledged riparians and prior appropriators, builders of diversion works giving full notice that the water was being put to beneficial use. This fact was never acknowledged by the American legal system. The *Winters* doctrine put Indian water rights in the hands of the federal government, which substantially changed the quality of the rights the natives should have received under aboriginal title. Furthermore, the Department of Interior, which may have serious conflicts of interest in the development of western waters, is supposed to be the guardian of the Indian rights. These conflicts may be especially sharp in light of the policies of the current administration which call for maximum exploitation of our natural resources to achieve the highest possible economic return.

50. M. SHEPPARDSON, NAVAJO WAYS IN GOVERNMENT (1963).

51. Castetter and Bell write that "[i]n native times inundation on the lower Colorado was extensive. However, the construction of dams on the river had practically elminated the overflow and has resulted in the abandonment of the ancient agricultural technique." *Supra* note 48, at 135.

52. Given by Act of Dec. 22, 1858, ch. 5, 11 Stat. 374.

53. New Mexico v. Aamodt, 537 F.2d 1102, 1112, 1113 (10th Cir. 1976).

In speaking of Indian water rights, a present-day tribal spokesman said:

> Earlier in the history of this continent, before the reservation system was established, before our white brothers appeared on this land, the Indian was able to use the water without competition or interference. Great care was always taken to conserve this precious resource.
>
> As this country grew, greater demands on the water supply were made. Still, at the time the reservations were being created, it appeared that there was enough water for all. With proper planning this may still be true.
>
> It must never be forgotten under that reservation system the lands and other natural resources of the Indians were not gifts from the United States. The land and water originally belonged fully to the Indians. The United States was the one receiving the grant. Neither the United States nor any State ever owned the water resources which now are found on the reservations.
>
> Thought must be given now to potential conflict that may arise in the future. The needs of all persons must be considered.[54]

While this statement reflects a minority view in the courts, it appears to reflect the reality that *should* have been acknowledged by the majority had they acted in accord with our common law. It is not suggested here that we retreat into history and grant Native Americans those aboriginal rights they were unduly denied in the past. But in the struggle that is to come over this precious resource, where relative rights and allocations are certain to be modified, it should be noted that the doctrine whereby the federal government took title to all water rights appurtenant to Indian lands was based on a myth—that the native peoples had not established any prior legal rights to water. That this was untrue is clearly demonstrated by our knowledge of the aboriginal cultures.

54. *The Southwest Indian Report*, U.S. Comm'n on Civil Rights (May 1973) (statement of Samson Miller, President of the Mescalero Apache).